

DOMINION OF CANADA

NUMBER

395958

To all to whom these presents shall come

Whereas

Peter N. Ottersland,

of Watertown,

New York,

U.S.A.,

has petitioned the Commissioner of Patents, praying for the grant of a Patent for an alleged new and useful improvement in Chippers,

a description of which invention is contained in the specification, of which a duplicate is herewith attached, and made an essential part hereof, and has complied with the requirements of the Patent Act.

Now Therefore the present Patent grants to the said

Peter N. Ottersland,

his executors, administrators, legal representatives and assigns, for the period of Seventeen Years from the date of these presents, the exclusive right, privilege and liberty of making, constructing and using, and vending to others to be used, in the Dominion of Canada, the said invention, subject nevertheless to adjudication before any Court of competent jurisdiction.

Provided that the grant hereby made is subject to the conditions contained in the Act aforesaid.

In Testimony Whereof, I have herewith set my hand, and caused the Seal of the Patents Office to be herewith affixed, at the City of Ottawa, in the Dominion of Canada, this Twenty-second day of April in the year of Our Lord, one thousand nine hundred and forty-one,

J T Mitchell
Commissioner of Patents.

REPRESENTATIVE IN CANADA.

Entered under Section 30, of the Patent
Act 1935.

Name.....Raymond A. Robic.....
Address.....1255 University St.....
.....Montreal, Quebec.....

464, 432

S P E C I F I C A T I O N

TO ALL WHOM IT MAY CONCERN:

Be it known that I, PETER N. OTTERSLAND, a resident of the City of Watertown, County of Jefferson and State of New York, United States of America, Engineer, having invented certain new and useful improvements in CHIPPERS, do hereby declare that the following is a full, clear and exact description of the same:

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This invention relates to CHIPPERS which are used for chipping or cutting logs into chips suitable for use in paper pulp machines.

Chippers usually consists of a rotary disk having a series of knives or blades, the log to be chipped being fed to the rotary cutter in an inclined feed spout or chute. As the knives are carried by the disk into engagement with the end of the log, the chips are cut therefrom.

In the chippers now in common use, the knives are so spaced around the disk that only one knife or blade is performing its cutting or chipping function at any one time. Thus, there is a considerable space on the disk between the successive knives or blades.

As the knives engage and cut chips from the end of the log, they tend to draw the log downwardly in the chute and while the knife cuts the log and before the next knife comes into action, there is a considerable pressure exerted between the end of the log and the surface of the disk. This causes the disk to wear, forming concaved or grooved portions between the knives. When the end of the log engages or moves into and leaves these grooved or concaved surfaces, it is kicked back and thus is not properly positioned for engagement by the knives. Furthermore, there is nothing in the chipper as now manufactured to engage and steady the log between successive cuts. As the

knives engage the log, the log tends to pivot about its lower edge since it usually does not entirely fill the feed spout and therefore "jumps around", thus preventing effective action of the knives.

This invention has for its salient object to provide a chipper so constructed and arranged that the chipping of the log will be expedited and rendered more efficient.

Another object of the invention is to provide a chipper so constructed and arranged that the log will be held steady in the chute at all times during the chipping operation and the chipper will therefore produce chips of more uniform length than are produced in machines of the conventional type.

Another object of the invention is to provide a chipper so constructed and arranged as to eliminate or minimize wear on the chipper disk between the knives.

Another object of the invention is to more than double the capacity of a chipper of any given size.

Further objects of the invention will appear from the following specification taken in connection with the drawings which form a part of this application, and in which

Fig. 1 is a vertical elevation of a chipper disk having knives thereon constructed and mounted in accordance with the invention; and

Fig. 2 is an irregular vertical section taken substantially on line 2-2 of Fig. 1.

The invention briefly described consists of a chipper disk or rotary knife supporting member having knives so mounted thereon relative to the discharge end of the feed spout that one or more than one knife will be continually in engagement with the log during the chipping operation.

Further details of the invention will appear from the following description.

In the particular embodiment of the invention illustrated there is shown a rotary chipper disk 10 carried by a shaft 11. An inclined feed spout 12 of the usual construction conducts the logs X to the cutter or chipper. An adjustable stationary cutting knife 13 is mounted on a bed 14 at the lower edge of the discharge end of the chute 12 for coaction with the cutting knives in finishing the cut in the log.

The disk 10 has mounted thereon a plurality of cutting blades 15, each blade being disposed in the rear of a slot 16 through which the chips are discharged.

The discharge end of the chute 12 is shown in dotted lines at 20 in Fig. 1 and it will be noted from the showing in this figure and also from the illustration in Fig. 2, that two successive blades or knives are in engagement with the end of the log X during the chipping operation. The knives tend to pull the logs downwardly in the chute during the operation thereof and thus two or more blades can operate simultaneously on the log.

Attention is called to the fact that in the chipper construction illustrated the knives are inclined relative to the disk and extend at an angle to the plane

of the disk and in a direction toward the discharge end of the chute. Due to this angular inclination of the knives they would tend to move longitudinally into the log being cut if they were free to move relative to the disk. However, since the knives cannot move relative to the disk, their inclination or angle of entrance into the log causes the log to be pulled downwardly in the chute as the knife performs its cutting or chipping operation.

This simultaneous operation of more than one knife insures a steadying action on the log at all times and prevents the log from jumping around, thus interfering with the efficient cutting action of the knives.

Although in the embodiment of the invention shown, two knives are illustrated as overlapping the discharge end of the feed spout or chute 12, it will be understood that this number may be increased and that three or more knives can be so positioned relative to the discharge end of the spout as to come into action simultaneously on a log disposed therein.

Although one specific embodiment of the invention has been particularly shown and described, it will be understood that the invention is capable of modification and that changes in the construction and in the arrangement of the various cooperating parts may be made without departing from the spirit or scope of the invention, as expressed in the following claims.

WHAT I CLAIM IS:

1. In combination, a chipper comprising a rotatable disk, a plurality of cutting knives carried thereby and symmetrically arranged thereon, said disk having a chip discharge slot in front of each knife in the direction of rotation of the disk, an inclined chute for feeding logs by gravity to the chipper, said knives being so arranged on the disk that each knife will cut for the full width of the log from the top to the bottom thereof and said knives being so disposed on the disk and relative to the discharge end of the chute that a plurality of knives will register simultaneously with the discharge end of the chute and be in simultaneous cutting operation on a log.

2. In combination, a chipper comprising a rotary carrier, a plurality of knives thereon, said rotary carrier having a slot therethrough in advance of each knife through which the chips are discharged and a downwardly inclined feed spout for conducting logs to said knives, said knives being inclined away from the plane of the rotary carrier and toward the discharge end of the feed spout and being so arranged on the carrier relative to the discharge end of the feed spout that a plurality of knives will be in simultaneous cutting operation on a log disposed in said spout, the inclination of the knives causing the log being operated upon to be pulled downwardly in the spout by the cutting action of the knives thereon.

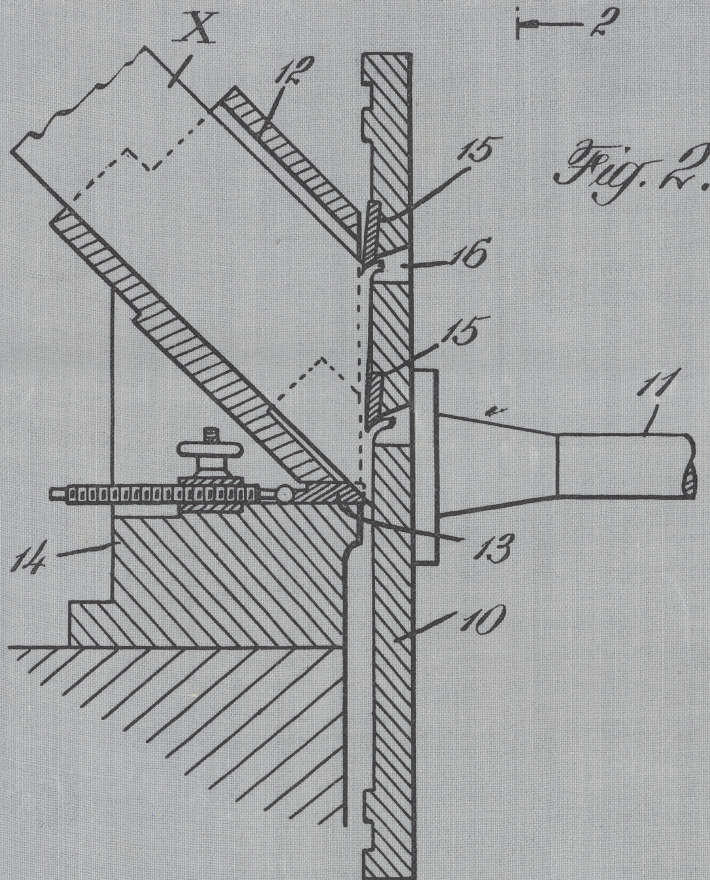
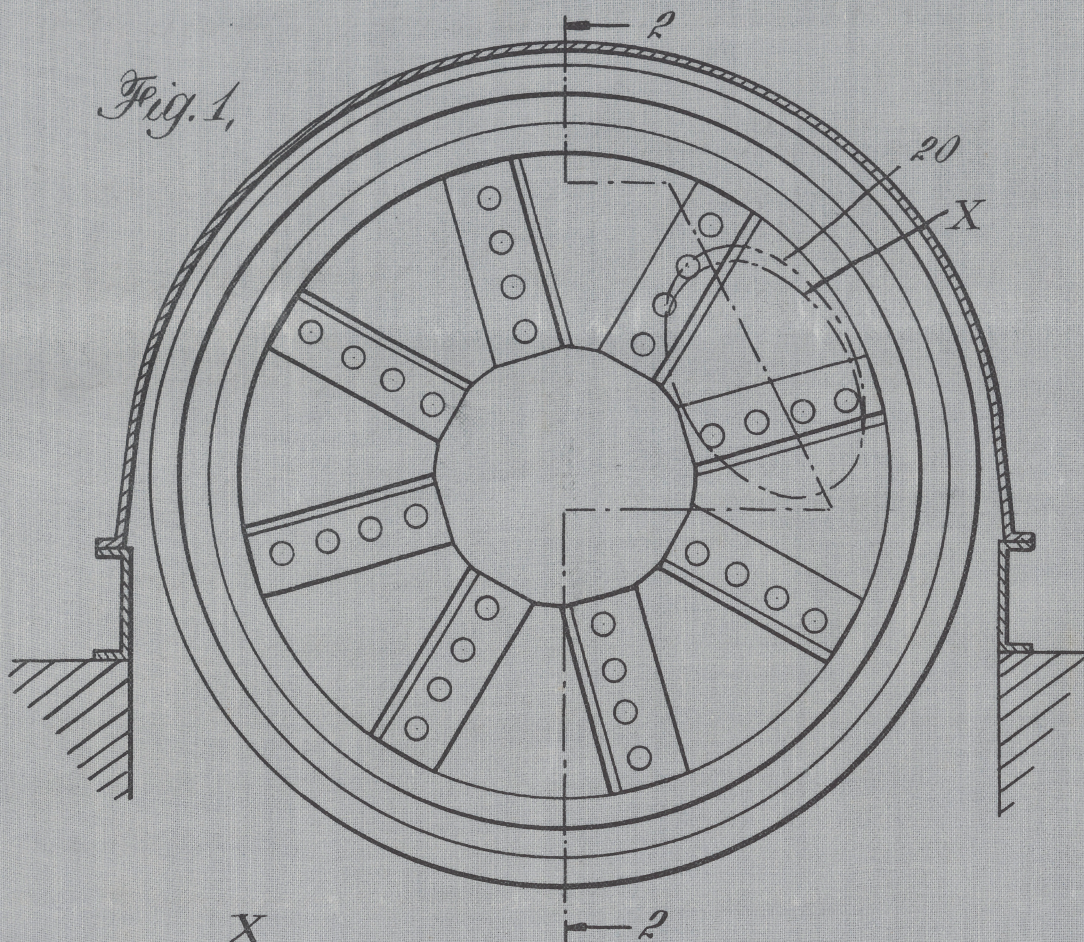
Signed at Carthage N.Y. USA
this 12th day of May 1939.

Peter N. Otterstrand

In the presence of:

Helen J. Cavanaugh

A. B. Wardwell Jr



Certified to be the drawing referred to
in the specification hereunto annexed.

MONTREAL, Canada, June 8, 1939.

BY:

Maxion

INVENTOR:
PETER N. OTTERSIAKD

J. Maxion

ATTORNEYS.

The attention of Patentees is called to the following section of The Patent Act, 1935.

Abuse of rights under patents.	"65. (1) The Attorney General of Canada or any person interested may at any time after the expiration of three years from the date of the grant of a patent apply to the Commissioner alleging in the case of that patent that there has been an abuse of the exclusive rights thereunder and asking for relief under this Act.
What amounts to such abuse.	(2) The exclusive rights under a patent shall be deemed to have been abused in any of the following circumstances:—
Not working, patented invention.	(a) If the patented invention (being one capable of being worked within Canada) is not being worked within Canada on a commercial scale, and no satisfactory reason can be given for such non-working:
Proviso.	Provided that, if an application is presented to the Commissioner on this ground, and the Commissioner is of opinion that the time which has elapsed since the grant of the patent has by reason of the nature of the invention or for any other cause been insufficient to enable the invention to be worked within Canada on a commercial scale, the Commissioner may make an order adjourning the application for such period as will in his opinion be sufficient for that purpose;
Prevention of working by importation.	(b) If the working of the invention within Canada on a commercial scale is being prevented or hindered by the importation from abroad of the patented article by the patentee or persons claiming under him, or by persons directly or indirectly purchasing from him, or by other persons against whom the patentee is not taking or has not taken any proceedings for infringement;
Not meeting demand.	(c) If the demand for the patented article in Canada is not being met to an adequate extent and on reasonable terms;
Prejudice to trade by refusal to licence.	(d) If, by reason of the refusal of the patentee to grant a licence or licences upon reasonable terms, the trade or industry of Canada or the trade of any person or class of persons trading in Canada, or the establishment of any new trade or industry in Canada, is prejudiced, and it is in the public interest that a licence or licences should be granted;
Prejudice by reason of conditions attached.	(e) If any trade or industry in Canada, or any person or class of persons engaged therein, is unfairly prejudiced by the conditions attached by the patentee, whether before or after the passing of this Act, to the purchase, hire, licence, or use of the patented article, or to the using or working of the patented process;
Prejudice in other respects.	(f) If it is shown that the existence of the patent, being a patent for an invention relating to a process involving the use of materials not protected by the patent or for an invention relating to a substance produced by such a process, has been utilized by the patentee so as unfairly to prejudice in Canada the manufacture, use or sale of any such materials.
Declaration of basis of grants of patents.	(3) It is declared with relation to every paragraph of the next foregoing subsection that, for the purpose of determining whether there has been any abuse of the exclusive rights under a patent, it shall be taken that patents for new inventions are granted not only to encourage invention but to secure that new inventions shall so far as possible be worked on a commercial scale in Canada without undue delay."

Patentees are advised to acquaint themselves with this and the other provisions of the Act.

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